

IEQ NEWS



We care about indoor air

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Indoor Environmental Quality

Issue #12

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Format Change-Last Issue

This will be the last issue of IEQ News. Instead, we will issue periodic technical briefs on emerging issues such as the topics contained in this issue. We hope you have found the newsletters informative. If you have any IEQ topics you would like addressed, please contact one of the IEQ staff.

IN THE NEWS:

California sets new standard for formaldehyde in particle board.

<http://www.wdma.com/i4a/pages/index.cfm?pageid=4181>

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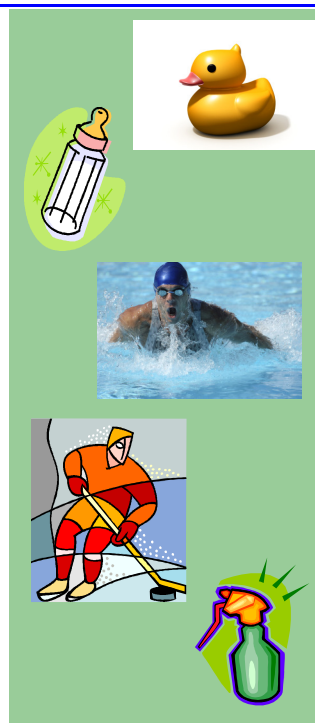


FOCUS: EMERGING IEQ ISSUES

As health officials, we need to keep abreast of emerging environmental health risks so that we can inform the public and take action to reduce risk in a timely manner. Science on indoor environmental quality is ever evolving and new risks are uncovered on a regular basis. This newsletter summarizes some of these emerging issues but is in no way a complete list.

A few such issues recently in the news include: bisphenol A and phthalates in plastics, indoor ice arenas and indoor water parks, and disinfection by-products. The health effects from exposure to these chemicals or environments containing them can range from in utero developmental problems to respiratory distress. However, there remains uncertainty as to the full effect from exposure to these and other environmental factors. More research is needed.

Scientists are now pursuing "green chemistry" so that any harmful environmental effects can be addressed before a product comes to market. Product developers are also looking at a product's life cycle for any potential health and/or environmental impact to eliminate or reduce exposure.



New Laws Passed!

Public Act No. 09-81 AN ACT CONCERNING GREEN CLEANING PRODUCTS IN SCHOOLS: To implement a green cleaning program at schools that uses environmentally preferable cleaning products and best cleaning management practices.

Public Act No. 09-192 AN ACT CONCERNING GREEN BUILDING STANDARDS AND ENERGY EFFICIENCY REQUIREMENTS FOR COMMERCIAL AND RESIDENTIAL BUILDINGS. To require the State Building Inspector and Codes and Standards Committee to revise the State Building Code to include a model energy code and green building standards for certain new construction or renovation projects.

Public Act No. 09-103 AN ACT BANNING CERTAIN CHILDREN'S PRODUCTS CONTAINING BISPENOL-A. To ban any children's products containing bisphenol-A marketed for the use of children under the age of three years, to prohibit the replacement of the use of bisphenol-A with certain carcinogenic substances, to ban any reusable food containers or jars or cans containing food or beverage products that contain bisphenol-A, and to require the labeling of certain products containing bisphenol-A.

Details of each law can be found at: <http://www.cga.ct.gov>

PLASTICS: Bisphenol A & Phthalates

Plastics are ubiquitous in today's environment. Some of the chemicals used to make them can impact health. Bisphenol A (BPA) is a chemical used in large quantities for the production of **hard** polycarbonate plastics for use in some food and drink packaging such as water bottles.

BPA can leach into food from consumer products such as polycarbonate tableware, food storage containers, water bottles, and baby bottles. The degree to which BPA leaches from polycarbonate bottles into liquid may depend more on the temperature of the liquid or bottle, than the age of the container. Polycarbonate is strong and durable, but over time it may break down from over use at high temperatures.

Human exposure to BPA is widespread through the diet in foods and beverages. Some animal studies report effects on fetuses and newborns exposed to BPA.

When possible, opt for glass, porcelain or stainless steel containers, particularly for hot food or liquids. For more information:

<http://www.niehs.nih.gov/health/docs/bpa-factsheet.pdf>

Soft plastics such as in children's toys, contain phthalates, a chemical used to increase the flexibility and durability of plastics. They are used in hundreds of products, including plastic clothing, such as raincoats; and personal-care products, such as soap, shampoo, hair spray, and nail polish. Phthalates are also used in flexible polyvinyl chloride plastic (PVC) products, such as plastic bags, garden hoses, inflatable recreational toys, and children's toys.

The health effects from exposure to phthalates are not fully known. It is recommended that exposure to these products be limited, especially for children who may chew on these toys.

For more information:

http://www.cdc.gov/exposurereport/pdf/factsheet_phthalates.pdf

DPH has a new **PLASTICS PRIMER** that provides a detailed guide to the different plastics including chemical names and health implications. It can be found at: <http://www.ct.gov/dph/toxicology>

Disinfection By-Products

Disinfection of water is one of the more important public health achievements. However, there is some question about possible health effects from the by-products of the process.

A 10 year study has demonstrated that "the process of disinfecting water with chlorine and chloramines and other types of disinfectants generates a class of compounds in the water that are called disinfection by-products. The disinfectant reacts with the organic material in the water and generates hundreds of different compounds. Some of these are toxic, some can cause birth defects, some are genotoxic, which damage DNA, and some we know are also carcinogenic". Read the full story at:

<http://www.sciencedaily.com/releases/2009/03/090331112725.htm>

Indoor Waterparks

The advent of indoor waterparks has brought complaints of respiratory and eye irritation from patrons and lifeguards. Tests at an indoor waterpark resort in Ohio revealed exposure to airborne trichloramine in the waterpark as the suspected cause of the symptoms.

The health district requested an investigation by CDC's National Institute for Occupational Safety and Health (NIOSH). The report describing the results of that investigation can be found at:

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5804a3.htm?s_cid=mm5804a3_e

Indoor Ice Arenas

Recently, in the U.S. there have been a number of ice rink poisonings linked to inadequate ventilation. In enclosed ice arenas, a primary source of indoor air concerns is the release of combustion pollutants such as carbon monoxide (CO), nitrogen dioxide (NO₂), and particulate matter (PM) into the indoor air from the exhaust of fuel-fired ice resurfacers.

High temperature and humidity levels can also increase concentrations of some pollutants. It is critical that indoor air quality is protected particularly when using fuel-burning equipment such as ice resurfacers indoors.

There are EPA standards for emissions from ice resurfacers. New machines that meet the most stringent EPA standards reduce hydrocarbon emissions by about 71 percent, nitrous oxide emissions by about 80 percent, and carbon monoxide emissions by about 57 percent. For more information go to:

<http://www.epa.gov/iaq/icearenas.html>



Tools for Schools: Cleaning, Disinfecting & H1N1

There has been much concern regarding the cleaning and disinfecting of surfaces in schools to help prevent the spread of viruses such as novel H1N1 flu (Swine Flu). Flu viruses spread from an ill person to others mainly through coughing or sneezing. Sometimes people may become infected by touching something with the virus on it and then touching their mouth, nose, or rubbing their eyes. To prevent the spread of influenza, it is important to practice good hygiene. For more information, visit the DPH web site at: <http://www.ct.gov/ctfluwatch>.

Studies have shown that the influenza virus can survive on environmental surfaces and can infect a person for up to 2-8 hours after being deposited on the surface. It is not necessary to close a school for the purpose of cleaning when influenza cases are detected among staff and students. Instead, schools should continue to clean and disinfect the school buildings with the products normally used according to the regularly followed schedule.

Disinfectants should be used judiciously on high contact surfaces to prevent over exposure to these potentially toxic chemicals.

REMINDER: TfS Custodian trainings and Green Cleaning Evaluations contain information about cleaning and disinfecting schools. Contact Kenny Foscue at 860-509-7740 to schedule.